



VOLUME 64 ISSUE 2

February 2014

## ARRL AFFILIATED-SPECIAL SERVICE CLUB

### *Pikes Peak Radio Amateur Association (PPRAA)*

#### Special points of interest:

- Ham Breakfast  
1 Feb 8:00AM-9:30AM  
Country Buffet,  
801 N. Academy Blvd
- PPRAA Board Meeting  
Mon 10 Feb 6:30PM-8:00PM  
Daniel Taco
- PPRAA Membership meeting  
Web 12 Feb 7:00PM-9:00PM  
IHOP 5749 Stetson Hills Blvd
- PPRAA Megafest  
Sat 26 July 8:00AM-1:00PM  
Lewis-Palmer High School
- 10 Meter Net  
Every Thursday 7:00PM  
28.390 USB

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#### Fifth Article of Incorporation

Pikes Peak Radio Amateur Association (PPRAA) was established in the early- to mid-1930s. In November the first article of incorporation was included in the Ø-Beat. The fifth article of incorporation is: *FIFTH. This corporation shall have no capital stock nor shall the Board of Directors or the members at any time or in any event by dissolution or otherwise, be considered the owners of or entitled to any of the assets, funds or properties of said corporation, all of which assets and properties shall be exclusively and forever devoted to the technical, educational and charitable purposes expressed in these articles of Incorporation.*

#### PPARES Region 2 District 2

The Amateur Radio Emergency Service (ARES®) is the emergency communications division of the American Radio Relay League (ARRL).

Pikes Peak Amateur Radio Emergency Service (PPARES) is an organized group of amateur radio operators whose goal is to provide emergency communications for both government and private agencies in the Colorado counties of Teller and El Paso when called upon. PPARES strives to enhance the reliability, quality and professionalism of Amateur Radio Emergency Service (ARES®) personnel, through the establishment of training and performance standards,

policies, procedures, management and supervision.

Pikes Peak ARES® provides public safety and public service communication support using HAM Radios when conventional communication systems are damaged, destroyed, overloaded or otherwise unavailable. PPARES tailors its communication services to the needs of its served agencies, which may be any governmental, law enforcement, fire, medical, disaster relief or non-profit agency/organization in El Paso and Teller Counties.

*Excerpt from PPARES website:*  
<http://www.ppares.net/news.php>

#### PPRAA at NCARC Hamfest—Loveland

January 18th was the excellent Northern Colorado Amateur Radio Club's (NCARC) Hamfest.

Because our dates for Megafest were not yet approved by the Lewis Palmer school district, we were unable to sell raffle tickets. The Elecraft KX3 along with our other prizes did pull a lot of people to our table.

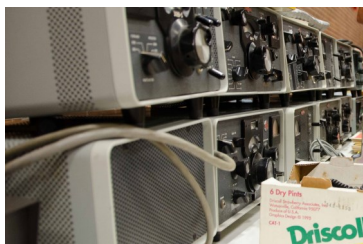
Members in attendance were Doug Nielsen-N7LEM, Diana Nordstrom-KCØNPP, Virgil Yost-NØXRS, Gordon Dixon-WØRGD, Pam Scott-WØPRS and Dan Scott-WØRO.

One interesting fund raiser was the "rat's nest" where you had to guess the cable length. We might have to look into something like that! Ideas?



NCARC's Rat's Nest  
(Photographer—Gordon Dixon, WØRGD)

## PPRAA Officers and Board of Directors



Megafest 2012—Collins Radio lineup.  
(Photographer—Dan Scott, WØRO)

PPRAA Board of Directors consists of four elected officers, seven board members, as well as the past president (time limit dependent). The Ø-Beat editor is a board appointed position and is also a member of the board.

Officers include:

- ⇒ President
- ⇒ Vice-President
- ⇒ Secretary
- ⇒ Treasurer

To send board member's email, browse to the officers section of our website: <http://ppraa.org/about-ppraa/officers>

President	Michael Derbort	KCØELG
Vide-President	Jim Bishop	KDØKQL
Secretary	John Wishart	NGØI
Treasurer	Pam Scott	WØPRS
Board Member	Doug Nielsen	N7LEM
Board Member	Tom Brereton	WØTOM
Board Member	Jim Rader	KDØNQM
Board Member	Diana Nordstrom	KCØNPP
Board Member	Jim Harris	WØEM
Board Member	Virgil Vost	NØXRS
Board Member	Chris Schroeder	KDØUQI
Ø-Beat Editor	Dan Scott	WØRO

## PPRAA Online Recourses and Social Media

*Solar forecast with  
calculated  
propagation  
information can be  
found on  
<http://ppraa.org>*

### PPRAA Website

<http://ppraa.org>

The PPRAA website is the cornerstone for club related information, events, and technical information.

In addition you can register, pay dues, and submit donations. Donations to the PPRAA college scholarship fund are managed by FAR Scholarship Committee .

### Facebook / Google+

Follow activities as they unfold, or get reminders of upcoming events.

Links to both Facebook and Google+ social media sites can be found on the PPRAA.org.

Or from each social media site search on: Pikes Peak Radio Amateur Association

### PPRAA Forums

The PPRAA forums are intended to allow users to exchange of ideas, ask and answer amateur radio related questions, and plan/discuss upcoming events.

This is a fantastic, but underutilized, tool.

Check it out and register at: [PPRAA.Forumotion.net](http://PPRAA.Forumotion.net)

## PPRAA Monthly Activities

### March Meeting

Neil Larson,  
KOMAX  
“Hidden  
transmitters,  
antennas and  
attenuators used  
in fox hunts.

### Membership Meeting

Held the 2nd Wednesday of the month starting at 7:00.

IHOP  
5749 Stetson Hills Blvd  
(Just west of Powers Blvd)

Next meeting is  
Feburary 12th 7 pm

NOTE: Many show up at 6 pm for kibitzing and grub.

### Board Meeting

Daniel's Taco Shop

6:30pm—8:00pm

6817 Space Village Ave  
(Just outside the north gate of  
Peterson AFB)

Board Meetings are open to all members.

### Ham Breakfast

Location changes monthly  
1 Feb 8:00AM-9:30AM  
Country Buffet,  
801 N. Academy Blvd

### 10 Meter Net

Every Thursday at 7pm  
Starts on 28.390 USB.  
May move to other bands within  
the technician class allocations.

## Morse Code Ring Tones

By Bob Witte—KØNR

I recently came across this iPhone app that generates Morse Code ring tones called...wait for it...Morse Code Ringtone. I've used some other methods for generating Morse ring tones but I've found this one to be particularly easy to use. The app costs \$1.99 so it is quite affordable.

Well, there is one thing that is kind of tricky: actually getting the ring tone onto your iPhone. It appears that Apple has not made this very easy for app programmers, so it is a little tricky to do. The method I found

to work is

- 1) use the app to create the ring tone on the iPhone
  - 2) email it to my computer
  - 3) save it somewhere on the computer
  - 4) import it into iTunes using "File" "Add File to Library".
- At this point, the ring tone should appear in iTunes and will be transferred to your iPhone the next time you sync.

After playing around with Morse Code tone and speed, I found that I really liked the sound of a 700 Hz tone sent at 30 wpm. My code speed is a somewhat reliable 15 wpm, so 30 wpm is well above my normal copy

speed. Still, I like the sound of this quick burp of CW. I set up these short Morse bursts to indicate various messages:

[CQ CQ](#) - default ring tone  
[TXT](#) - text message  
[VM](#) - voice mail  
[MAIL](#) - email message

You can play these ringtones by clicking on the name above, or do a right-click to download them to your PC. Windows Media Player can play these files, but it gave me an error when I tried it. I just clicked through and it worked fine.

But you should really get the

app and create some ring tones of your own.

73, Bob KØNR

*This article was plagiarized verbatim with permission from Bob, KØNR.*

*Bob's blog can be found at [www.kØnr.com/wordpress](http://www.kØnr.com/wordpress) For interesting information, articles and blog visit: [www.kØnr.com](http://www.kØnr.com)*

*NOTE: See this article on KØNR: Radio Enthusiast blog in order to follow the links.*

## Megafest—July 26th

Due to scheduling approval process in the school district it took us longer to obtain a date for the Megafest.

The date is now set for July 26th. MARK YOUR CALENDARS NOW.

Table setup will be Friday afternoon from 4pm until 6pm.

On Megafest day, Vendors are allowed in at 6am.

General admission entry begins at 8am. Although Megafest is scheduled to end at 1pm, we generally start cleaning up starting sometime between noon and 1pm.

The raffle drawing is at 12:00PM

We are already collecting prizes for the hourly door prizes. If you know someone that would be willing to donate to the door

prize prizes, please ask them and get that prize to the PPRAA Megafest committee.

Check the website for updates.

We can always use more help prior to, during, and after Megafest. Like the raffle drawing, you do not need to be present to help!

### Megafest Raffle Prizes

- ⇒ Elecraft KX-3
- ⇒ ICOM ID-51A
- ⇒ RigExpert AA-54
- ⇒ Signal Link USB
- ⇒ Butternut HF9V

For more information browse to:  
<http://ppraa.org/megafest>

## EL PASO COUNTY SHERIFF'S OFFICE OFFERS CITIZEN EMERGENCY RESPONSE TRAINING

The El Paso County Sheriff's Office Emergency Services Division is proud to announce its 2014 schedule for Citizen Emergency Response Training (CERT). As a county, we want to be prepared to face any emergency or disaster which may affect our way of life. Following a major disaster, the demands placed on the services provided by law enforcement agencies, fire



Picture from the El Paso County Sheriff's Office Website

departments and emergent medical care are tremendous.

Because these public services can be delayed for any number of reasons during a large scale emergency, it's important for

members of the community to learn how to care for themselves, their loved ones and their neighbors until help can arrive. CERT classes work to enhance the safety of all citizens by preparing them for

these events.

Training is available throughout the year, with the first session scheduled for March 1-2 from 8:00 a.m. to 5:00 p.m. each day. For a list of additional training sessions or to

complete a registration form please follow this link: <http://bit.ly/KCqVxP>

Questions about the training can be directed to [cert@elpasoco.com](mailto:cert@elpasoco.com) or 719-575-8400.

## Getting an Antenna to Work—Part 9

*“Using a dipole, vertical or Isotron antenna, the R value, in general, can range from 20 to 250 ohms.”*

The last article was describing the use of a Noise Bridge. This device is connected directly to the antenna. It will identify the resonant point and the Radiation Resistance at that frequency. The resonant point is the most important part of the tuning and this is adjusted by the length of the antenna generally. On the an Isotron antenna it is a capacitive adjustment. However what can you do about the R value when it is not 50 ohms? (The R value referred to is the reading on the Noise Bridge or Radiation Resistance of the antenna).

Using a dipole, vertical or Isotron antenna, the R value, in general, can range from 20 to 250 ohms. How can this be adjusted to 50 ohms?

The R value is much affected by the antenna's environment. The conductivity of the earth under the antenna is a big factor. In most cases, the shield side of the coax is considered the ground side of the antenna.

Therefore if you stretch out a dipole, one half is the shield side (considering no balun). The shield side is affected by the ground conductivity. This is one of the reasons that a dipole increases in Resistance (R) with an increase in height. On the other hand a vertical will have a

low Resistance with the radial system used.

To lower the R value of an antenna, the shield side needs more conductivity to ground. In the April (may O-Beat) issue it was recommended to mount your antennas on a metal pole. This pole in turn is grounded to the earth. Keep in mind the pole is much larger than a wire and will develop a much lower inductive reactance. Therefore securing the coax to the pole up to the antenna will have the affect of lowering the R of the antenna. If it needs to go lower, then you can actually ground the shield side of the antenna to the pole.

Grounding the shield side to the antenna pole can lower the R value too low. However this is easy to fix. Use a small capacitor ( about 100 pf) to ground the antenna to the mast. You will see the R reading on the Noise Bridge increase from fully grounded.

This is how we adjust the R on the Isotron antenna (just a little propaganda).

With a vertical it is not as adjustable. If your radials are above ground you can try releasing it from the earth ground, but it may have only a few ohms difference.

Keep in mind, if the antenna is resonant, the antenna is most likely working at full efficiency. With the R value differing from 30 to 200 ohms off of 50 ohms, the loss is hardly noticed if matched at the radio with a Tuner.

This will also be true in expanding the Band width of the antenna. For most antennas, once you have the Resonant point in the band you are using, adjusting the Reactance (X) and R with a Tuner will result in little signal loss.

Next article will continue on setting up the antenna in a more difficult installation.<sup>73</sup>,

Ralph WD0EJA,

BILAL COMPANY  
137 MANCHESTER DR.,  
FLORISSANT, CO. 80816  
U.S.APH/FX: 719/687-0650

wd0eja@isotronantennas.com



Isotron 10/15/20

## February PPRAA meeting presentation

At the February 12th meeting Ralph, WD0EJA will be presenting How the Isotron Antenna Works .

Finding out about these antenna has been on my radar for quite some time. If you, too are curious about these fascinating antennas, you definitely do not want to miss this meeting!

NOTE: The March will be “hidden transmitters, antennas and attenuators used in fox hunts”

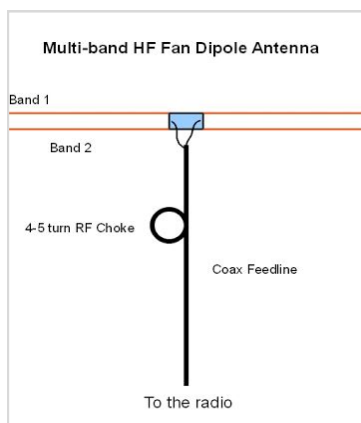
The April meeting will be about Jamboree On The Air



## WBØTGE “Mighty Woof” 2m/440cm Dual Band Fan Dipole (DBFD)

I call this the “Mighty Woof” antenna. It reminds me of two “Wouff Hong” (created by Hiram Percy Maxim) joined together at the base creating an awesome signal.

The WOTLM 2013 fall tech day had many great displays and instructional sessions for club members. I watched a presentation by Bob Witte, KØNR, which discussed the many types of antennas available to amateur radio operators and the benefits each antenna design provides. It was an excellent technical presentation.



One of the antennas Bob discussed was the HF wire fan dipole. This is a multi-band antenna which gives the amateur the capability of utilizing several radio bands with only one feeder line. The fan dipole is usually constructed of multiple sections of wire tuned for each band required.

That night at home the thought struck me that the fan dipole could be used for the VHF/UHF bands. I like building antennas from copper pipe and have made many j-poles for myself

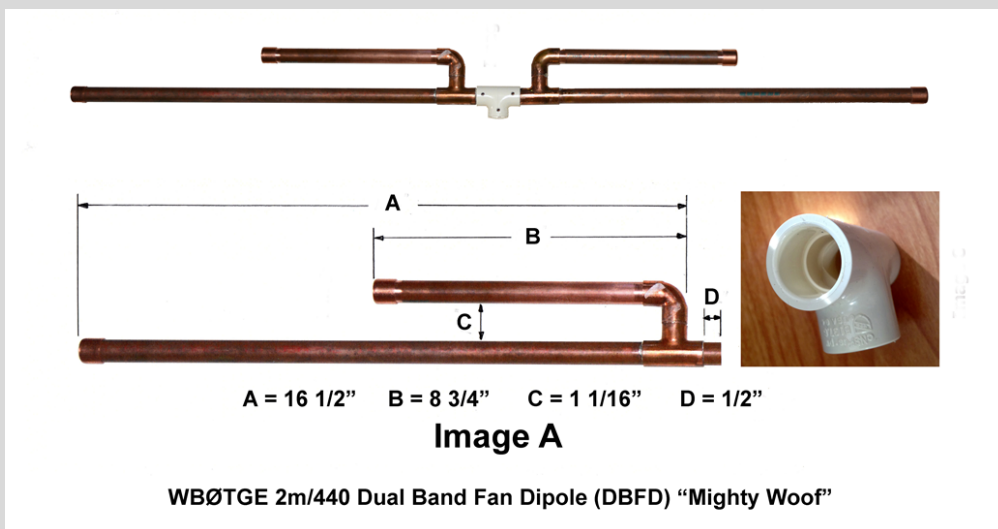
and others. I did an online search for copper pipe fan dipoles and found none. Was it because they didn't work? Well that became a challenge. The

design presented here was developed empirically by using cut and test methodology with SWR measurements being made after each adjustment..

*This is a 2-part article. The second part of the “Mighty Woof” construction will appear in the March Ø-Beat*

The antenna is constructed using 1/2” copper pipe and copper fittings. Cost <\$25. The center section utilizes a 1/2” NIBCO CPVC SxSxS Tee purchased at Home Depot. This plastic tee inside diameter matches the outside diameter of 1/2” copper pipe. The antenna is constructed using 1/2” copper pipe and copper fittings. Cost <\$25. The center section utilizes a 1/2” NIBCO CPVC SxSxS Tee purchased at Home Depot. This plastic tee inside diameter matches the outside diameter of 1/2” copper pipe.

Construct two half sections of the dipole using the dimensions in the following image (Image A).



As you cut the copper pieces fit them together and measure the result. Measure with the end caps on the ends of the two long sections. The end caps are included in the finished dimensions. Cut each piece of copper pipe a little long initially so that you can trim to fit the finished dimension later. This is necessary because copper fittings vary in dimension between manufacturers. Use a 7/8” length piece of copper pipe to butt join the elbow to the tee at the base of the dipole half. Also the piece on the bottom of the dipole half should not extend more than 1/2” from the tee.

When you purchase the 90 degree elbows find the most compact sizes. This will allow the elbows to be butt soldered to the tees for the proper center dimension of the fan dipole without having to trim one or both of the elbows to make them shorter.

After all of the pieces have been cut/trimmed, fitted together and measured, solder the pieces using lead free solder and flux.

(NOTE: I know there are discussions that plumbing flux should never be used on electronics, however, this is not electronics it's plumbing, so don't worry. This soldering method is what is needed for the outside use of these antennas.)



**Wear protective clothing, work in a well ventilated area, and observe proper safety precautions whenever soldering.)**

Continued in the March issue

## PPRAA Board Minutes— 6 January 2014



President Michael DeBort called the PPRAA board meeting to order at 6:39 PM at Daniels Taco Shop Restaurant.

Present: Michael DeBort, John Wishart, Pam & Dan Scott, Virgil Yost, Jim Bishop, Doug Neilsen, Diana Nordstrom, Jim Rader, Jim Harris, Tom Brereton

### 2014 Goals & Objectives

1. New Leadership - how do we get new members of the board and officers?
2. Financials
  - Members - 20 more paying members
  - Megafest - \$2500
3. Club Station - at least one operating club station and the building completed
4. Special Events
  - 75 yrs of service
  - Scouting event

### Committee Reports

- ⇒ **Treasurer's Report**  
Pam provided a copy of the treasurer's report. Balance as of 31 Dec 2013 was \$10,624.53.
- ⇒ **2014 Budget** - Pam provided an updated proposed budget for 2014. Several changes were discussed.

### Building Committee

- Station Building
- ⇒ interior layout needed solar panels are at the site, need to provide power, erect

antennas.

- ⇒ Land Use Agreement - not signed off yet.
- ⇒ A motion was made and seconded to donate our surplus (donated to us) repeater system to Eads, CO, "Emergency Services" (contact there is Nancy McCain K5NLM). Passed.

### Megafest 2014

- ⇒ Do we have a venue yet? No, we are still waiting on the confirmed date from the school.

**Electronic Media** - no report.

### Asset Committee

Virgil discussed some questions about insurance for the club station. Our liability insurance policy was just renewed.

### Scholarship Fund

Where do we stand? We are up \$307 for 2014 already.

### Zero Beat

Dan is soliciting material for articles.

### ARES

Jim Bishop reported he had no new information to report for this month.

**Tech Ed** - no report

### New Business

El Paso County Combined Club

### Membership Proposal

Proposed membership fees were discussed.

### Elections & Open Appointments

Megafest Chairman is still needed

### Unfinished Business

Ham Breakfast - at Country Buffet, 801 N. Academy, Saturday, 1 Feb 14, 8-9:30AM

Next Board Meeting: Monday, 10 February 2014, at Daniel's Taco Shop.

### Around The Table

Dan needs material for the Zero Beat.

Jim Rader thanks Mark Taylor, Oliver Taylor, Virgil Yost & Jim Bishop (& Jim Rader) for getting the solar panels loaded and moved.

Motion was made/seconded to obtain a gas card & thank you letter to Oliver for \$25 and letter of appreciation. Passed.

Tom: his friend was having a problem contacting someone.

Meeting was adjourned at 8:10PM.

Respectfully Submitted,  
John Wishart NGOI  
Secretary  
26 January 2014

*"...up \$307 for  
2014 already"*

## Upcoming Major Events

2014 The Swapfest  
Sunday, February 9  
Adams County Fairgrounds  
Brighton, CO

2014 LARC Fest  
Sunday, April 5  
Boulder County Fairgrounds  
Longmont, CO

Ham Radio License Class  
Saturday(s) April 12 & 19  
Tri-Lakes Monument Fire Station 1  
Monument, CO

Rocky Mountain Division Convention  
Wyoming HamCon  
July 11-13

PPRAA Megafest  
Saturday, July 26th

For additional Information and links to these events visit the PPRAA home page at:

<http://ppraa.org>.

## PPRAA Membership Meeting—8 January 2014

President Michael Debort called the PPRAA general meeting to order at 7:00 PM at IHOP Restaurant at 5749 Stetson Hills Blvd.

Silent Keys – Mike Dassero  
NOMUD

No minutes from the Christmas party.

### 2014 Goals and Objectives

- ⇒ New leadership
- ⇒ Financials - Add 20 new paying members, make \$2500 on Megafest
- ⇒ Club station -at least one station permanently online, trailer completed
- ⇒ Special Events
- ⇒ 75 years of service by our club
- ⇒ Scouting event

### Committee Reports

#### Treasurer's Report

Pam: The board agreed to the 2014 budget

### Asset Committee

Virgil - Our insurance is in force

### Club Station update

Dan - Need a layout design, need help in moving the solar panels. The solar panel transport team was recognized.

**Electronic Media** – Doug - reported on our website

**Technical Education** - Mike reported on his activities

**Zero Beat** – Deadline for article submissions is December 25.

**ARES Update** - Jim reported on ARES events and activities

### Scholarship Fund

- ⇒ Please donate for the 2013 school year.
- ⇒ Can now donate directly to Foundation of Amateur Radio.
- ⇒ El Paso County Amateur Radio Club Consolidated Membership
- ⇒ Details of this are still being formalized.

### Megafest 2014

Saturday, July 26th at Lewis Palmer High School, Monument, CO. Please consider joining the planning committee.

### Program

The program for the evening was Show and Tell.

### Upcoming Events / Notices

- ⇒ VE's - Please consider becoming a Volunteer Examiner.
- ⇒ Ham Breakfast - Country Buffet, 801 N. Academy Blvd. Saturday, 1 Feb 2014, 8-9:30AM.

Thursday night net: Meets on the air every Thursday at 28.390 MHz (USB, 10m band).

Next Meeting: 7:00PM, 12 February 2014, IHOP Restaurant, Stetson Hills Blvd. & Powers

Respectfully Submitted,  
John Wishart NGOI  
Secretary

26 January 2014

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*"...please consider becoming a Volunteer Examiner."*

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*"...July 26th at Lewis Palmer High School, Monument, CO."*

## 30 Years Ago—February 1984

The February meeting will be held at a new location: Giuseppe's, at 7:30 pm. The Palmer House wanted to charge \$25 per meeting and wants the club to buy the coffee from the motel. The board decided to establish a hamfest committee to look into future possibilities for a larger hamfest starting in 1985.

President Joe Quintana NØENM had to resign as president, and the club is looking for a new vice president, as Al Vrooman

NØCMW fills the missing post. Bill KQØH was elected to fill Charlie Biggs board position vacated last month. The club will buy instructional video tapes for ham radio.

The repeater committee has decided that a repeater would not be good due to the costs and a desire not to fragment the club. The Rocky Mountain Division ARRL Hamvention and Conference will be coming to Denver May 25 to May 27.

## Contest Corner

The following list are contests and QSO parties I thought looked interesting.

For a full list of contest, visit [www.hornucopia.com](http://www.hornucopia.com). Or Google "8-day contests".

February seems to have quite a lot of state QSO parties. Great time to work on a QRP Worked All States (WAS) certificate.

- Feb 1—Vermont QSO Party
- Feb 1—10-10 Winter, SSB
- Feb 1—Minnesota QSO Party
- Feb 1—Delaware QSO Party
- Feb 8—CQ WW RTTY WPX
- Feb 8—New Hampshire QSO Party
- Feb 15—ARRL Inter. DX, CW
- Feb 21—CQ 160-Meter, SSB
- Feb 22—N.Am QSO Party, RTTY
- Feb 23—North Carolina QSO Party

## Colorado QSO party—Soap Box Comments

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*“Colo QSO Part is  
one of the most fun  
operating events of  
the year.  
Keep it going!”*

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AA0JD

SOAPBOX: Bill Bear, KCOQXX, Steve Schroder, KIOKY and myself again ran a multi-op portable station from Lizard Head Pass, 10,300 foot elev. WX was rainy, but we didn't care, because we love this event. ANT's were a dipole and a 3 element beam. Band condx were probably average, but everything went to noise about 8:30pm local. We were able to work more Colorado counties (on 40m) than last year, but worked fewer states. A portable operation is like a mini-field day at a different part of the year.

Last year we had a fourth op who ran CW. For 2014, it is CW capability from the site, or die! We are definitely working on CW capability.

Colo QSO Part is one of the most fun operating events of the year. Keep it going!

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73 Royce Seymour AA0JD

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AB0CD

SOAPBOX: Got started very late, last 90 minutes. Hoped to work the COQP all day but family matters intervened. Ran a K2 at 5W into one of my temp field antennas, a simple 44-foot doublet, run as a 22-foot vertical on a fiberglass mast, with the other leg as a counterpoise.

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K0NR

Thanks for running the COQP...it is a great event!

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K6CSL

SOAPBOX: I'm sorry I didn't have much time away from other necessities, but did get on for an hour of COQP fun.

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K8FZY

SOAPBOX:hi all. had great time thank you.

---

KCORPS

SOAPBOX: COAL CREEK CANYON, JEFFERSON

Thank you for organizing the contest!

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KD0KQL

It was a pretty good year. Only got to spend a short time at it but it was fruitful.

---

KD0UVX

SOAPBOX: THANK YOU for putting on the 2013 COQP Party! It was a blast, can't wait for next year.

---

KH6SF

Not after points myself, only 2 anyway, but want to make sure Brian gets credit.

Contact was made from a battery operated station running 90 watts on a simple dipole strung between a pole and a palm tree, at a preparedness fair in Puna district, town of Keaau on the big island of Hawaii (Hawaii County). Made a great demo of Amateur radio in a public setting.

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*“...town of Keaau  
on the big island of  
Hawaii (Hawaii  
County). Made a  
great demo of  
Amateur radio in a  
public setting.”*

My previous call-sign was KDOQLQ, and I did participate in the Colorado QSO party last year with our ARES group in Colorado. Interesting to see it from the other side, even if it was completely by accident.

Next year, we'll work it on purpose!

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KI0I

SOAPBOX:Band condx didn't play well into MO. 20m was long and 40m along with 80m were very noisy with QRN.Tried to make trips to CO QP during CWOPS test. No big score in either hihi. Thanks to all the Colorado ops especially the guys out there mobile. I just wrked KSQP as a mobile and know it's a lot more fun when you are busy! Thanks again to all, 73 Mark KI0I (GENLOG is weird on this contest so I had to delete a couple of qso lines, dont know what it'll do to my score)

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KJ4LTA

SOAPBOX: Thanks, It was Fun!! ED

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## Colorado QSO Party—Soapbox comments (continued)

KJ80

My first time to submit a log in your QSO Party, had an enjoyable time.

Many thanks

NOLD

SOAPBOX: My first CO QSO Party from my new Missouri QTH. I would have liked to have seen more mobile stations. Could only work the base stations on voice. And only one PSK31 station. Enjoyed the contest, wish I could have worked more on 40m, too!

NOWRK

SOAPBOX: Portable station, 100 watts, operated from portable set up in Delta County then moved to Mesa County. Great fun, tough to move in a rain/hail storm.

N1NN

SOAPBOX: 6TH COLORADO QSO PARTY

N3KN

Sorry I couldn't find more stations to work, but I had a good time anyhow. See you next year, I hope. 73 - Kay

N3KN

N5ZGT

SOAPBOX: \*\*\* Operated portable from Conejos County. Included 500 bonus points in claimed score \*\*\*

N7MZW

SOAPBOX: I was happy to give out the Wyoming mult to a few folks, but band conditions were tough with high QRN!

PA3ARM

SOAPBOX: Thanks for being on the road in the first place ; and for giving me some new CO counties in my effort to become the first PA to work all 3077 US counties hi . Enjoyed the pre-party excitement !

SP5SA

SOAPBOX: ICOM 765 100 W 2 ele QQ

Plik utworzony programem "Cabrillo Generator v.2.1.9" - (c) SP7DQR

VA3RKM

SOAPBOX: K3, 5w, verticals

WOCO

SOAPBOX: I enjoyed the QSO Party and thank you for sponsoring this event.

WORA

SOAPBOX: Interesting band conditions, or lack thereof. I never heard anything on 10 or 15 meters. I couldn't get anything going on CW because of the CWOps contest crowding the bands. RTTY was a waste of time, at least from this QTH. If this is the peak of the cycle, it leaves a lot to be desired. Twenty stayed open late. I even picked up a few DX stations at the end. But 15 minutes before the "official" end of the COQP, 20 went deader than the proverbial door nail. It was still fun, but I didn't get a clean sweep on all the states or Canada. Looking forward to next year, the Good Lord willing and the creek doesn't rise. Hi HI.

W1END

SOAPBOX: Thanks to all the Coloradans for coming out to play.

Rig was FTdx5000 (150w) and Butternut HF6V all-band vertical.

W7GKF

Thanks for another good QP. Seemed like a little less activity this year. Maybe because of the competing contests.

I will notify N1MM once again about the difference in score calculation between N1MM and COQP rules.

W8KNO

SOAPBOX: Had a good time, worked four counties I did not have confirmed.

---

*“...portable set up  
in Delta County  
then moved to  
Mesa County.”*

---

*PA3ARM:*

*“...and for giving  
me some new CO  
counties in my effort  
to become the first  
PA to work all  
3077 US counties  
hi”*



Becoming a VE examiner is a wise idea  
(Photographer: Dan Scott WØRO)

## VE Testing Colorado Spring (PPRAA)

Pikes Peak Radio Amateur Association (PPRAA)

When:  
Feb, Apr, Jun, Aug, Oct, Dec  
2nd Saturday at 9 AM

Location:  
Colorado Technical University (CTU)  
4435 North Chestnut  
Colorado Springs, CO 80907

Directions:  
<http://ppraa.org/ve-testing>  
or contact:  
Dan Martin  
VE@PPRAA.org



## VE Testing Woodland Park (MARC)

MOUNTAIN AMATEUR RADIO CLUB (MARC)

When:  
Jan, Mar, May, Jul, Sep, Nov  
1st Saturday at 10 AM

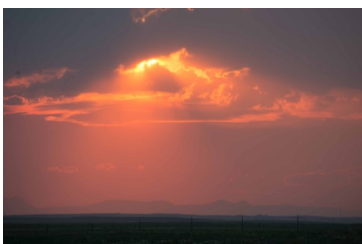
Location:  
Woodland Park  
Woodland Park Library-Community Meeting RM  
218 East Midland Avenue

Directions:  
<http://www.nx0g.org/ve.html>

or contact  
Wes Wilson (KØHBZ)  
k0hzbz@arrl.net  
Call (719) 687-8758

## Applicants will need the following items:

1. A valid PHOTO ID, driver's license preferred (if you do not have a valid photo ID, please call for alternative identification requirements).  
*made out to either PPRAA or MARC (site dependent). This covers all exams you wish to take at this VE session.*
2. Your FRN or SOCIAL SECURITY NUMBER (now required – this includes children).  
*NOTE: PPRAA and MARC VE Team policy, as with many VE Teams, is to not allow same day retests on failed exams.*
3. Your CURRENT ORIGINAL amateur radio license (if any) and a PHOTOCOPY for the VE Team to keep.  
*PPRAA – Colorado Springs testing only: Anyone passing their Technician Class examination at a PPRAA test session will receive a free year's membership to the Pikes Peak Radio Amateur Association.*
4. The CURRENT ORIGINAL CSCs you have and a PHOTOCOPY for the VE Team to keep.
5. Cash, Check or Money Order for \$15 (standard ARRL VE Fee). Checks and money orders should be



Club Station—West nearing sunset  
(Photographer—Dan Scott, WØRO)

## PPRAA Club Station

Club station work days are to be scheduled to follow the monthly "Ham Breakfast". This give us an easy want to get car pooling lined up, while chowing down.

Over the last summer and fall we have been working on the PPRAA Club Station just outside of Ellicott.

The location is on flat ground with basically an unobstructed view of the horizon. We are situated in a 20 acre field of 40 available acres.

To the west there is a great view of the front range. Sunsets over Pikes Peak have been beautiful.

We are building the station in a 28-foot camping trailer which we gutted. The major add-on has been fitting a 3/4" plywood layer over the existing floor.

The solar panels are at the trailer site as are the matching standards. This is a whole house system and has more than enough power to run the station.

Inside we need to screw the floor in place, install conduit, run the electrical wiring, and then put in carpeting.

Outside we need to work on electrical and RF entry points with grounding "window".

Although we are three beam and towers available the plan is to start with one or two wire antenna.

The goal it to have one and maybe as many as four operating position ready by Field Day.

If you want to be added to the stations email list send a request to [station@ppraa.org](mailto:station@ppraa.org).

73,

Dan—WØRO

## HamRadioSchool.com—Repeater Question 1

### Repeater Questions!

This Technician Question of the Week is actually multiple questions related to repeaters with brief explanations for each. Reference the current Ham Radio 101 Article, Introduction to Repeaters, for more information related to this subset of questions from the Technician Class question pool about repeaters.

#### T1F09: What type of amateur station simultaneously

**retransmits the signal of another amateur station on a different channel or channels?**

- A. Beacon station
- B. Earth station
- C. Repeater station
- D. Message forwarding station

Answer: Clearly, the answer here is C. Repeater station. A repeater is simply a special type of amateur station designed to

instantaneously retransmit your signal when it is properly received by the repeater.

Repeaters usually help extend the reach of your transceiver by retransmitting from a high elevation and perhaps with greater power than is provided by your transmitter in reaching the repeater. The most popular type of repeaters in the US are FM repeaters on VHF and UHF frequencies (2-meter band, 1.25-meter band, and 70-



## HamRadioSchool.com—Repeater Question 2

#### T1F10: Who is accountable should a repeater inadvertently retransmit communications that violate the FCC rules?

- A. The control operator of the originating station
- B. The control operator of the repeater
- C. The owner of the repeater

- D. Both the originating station and the repeater owner

Answer: A repeater is just a dumb parrot operating on automatic control most of the time (Question T1E08). It has no means of filtering the content of its repeated transmissions. It is not possible for a repeater operator to

constantly monitor and moderate transmissions being repeated by the machine. Thus, the correct answer here is A. The control operator of the originating station. The ham originating transmissions to the repeater is responsible for adhering to all FCC Part 97 rules.

*“Who is responsible if a repeater...”*

## HamRadioSchool.com—Repeater Question 3

#### T2A01: What is the most common repeater frequency offset in the 2 meter band?

- A. plus 500 kHz
- B. plus or minus 600 kHz
- C. minus 500 kHz
- D. Only plus 600 kHz

Answer: The offset is the difference between the “listen” frequency and the “talk” frequency used by the repeater, or viewed from the repeater’s

perspective, the difference between the repeater’s transmit and receive frequencies (Question T4B11). From the repeater user’s perspective, the listen frequency is used to monitor the repeater’s transmission and the talk frequency is used to transmit to the repeater. The offset may be positive (+) or negative (-): If the talk frequency is higher (above) the listen frequency, the offset is positive (+); if the talk frequency is lower (below) the

listen frequency, the offset is negative (-). Each amateur band has a designated standard value for the offset, and in the 2-meter band the standard offset is plus or minus 600 kHz (0.6 MHz). The standard offset for the 70-centimeter band is +/- 5 MHz (Question T2A03). The 1.25-meter band offset standard is -1.6 MHz. The correct answer for this question regarding the 2-meter band offset is B. plus or minus 600 kHz.



CMRG Raton Pass repeater site  
(Photographer—Pam Scott, W0PRS)



## *Pikes Peak Radio Amateur Association*

Mail membership application to:

Pikes Peak Radio Amateur Association, Inc  
P.O. Box 16521  
Colorado Springs, Colorado 80935

**Get on the air, be radio active!**

**We're on the web**

**<http://ppraa.org>**

### *Membership Application:*

Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ New Membership: Yes / No

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Call: \_\_\_\_\_ Class: \_\_\_\_ Phone # (\_\_\_\_) \_\_\_\_\_

Email: \_\_\_\_\_

Are you a ARRL member: Yes / No

### *Additional Family Members:*

Name1: \_\_\_\_\_ Call: \_\_\_\_\_ Class: \_\_\_\_ ARRL Mbr?

Name2: \_\_\_\_\_ Call: \_\_\_\_\_ Class: \_\_\_\_ ARRL Mbr?

Name3: \_\_\_\_\_ Call: \_\_\_\_\_ Class : \_\_\_\_ ARRL Mbr?

\_\_\_\_ \$15.00 Full Member

\_\_\_\_ \$10.00 Full Member over 65

\_\_\_\_ \$18.00 Family Membership

\_\_\_\_ \$12.00 Family Membership over 65

\$\_\_\_\_ Scholarship Fund Donation

\$\_\_\_\_ PPRAA General Fund Donatio

## **Scholarship Fund**

The PPRAA strives to provide educational and recreational activities for its members intended to further their knowledge in the art of radio communications. The PPRAA encourages its members to participate in public service communications, civil defense, charitable fund drives and other activities for which amateur radio is particularly adapted. In this spirit of public service the PPRAA embarked over three years ago on creating a scholarship fund to promote undergraduate students to excel in the Engineering and Sciences. The fund will award one \$1,000 scholarship per

year and be open to any student who is pursuing an undergraduate degree in either Engineering (Electrical, Civil, Mechanical, Chemical, Aeronautical, Astronautical) or the hard sciences (Physics, Chemistry, Computer Science) at any accredited university with an emphasis on Colorado institutions. The scholarship program will be managed by the Foundation for Amateur Radio located in Washington, DC and with help from Amateur Radio enthusiasts such as you; it will be ready for the 2015 school year.

Anonymous donations may be

made directly to the scholarship fund at:

FAR Scholarship Committee  
P.O. Box 911  
Columbia, MD 21044  
Checks to: PPRAA Scholarship

Online, secure, donations can be made at:  
[ppraa.org/donations](http://ppraa.org/donations).

Consider adding a donation to your membership when you renew online.



Support the PPRAA Scholarship Fund  
Picture of Colorado College